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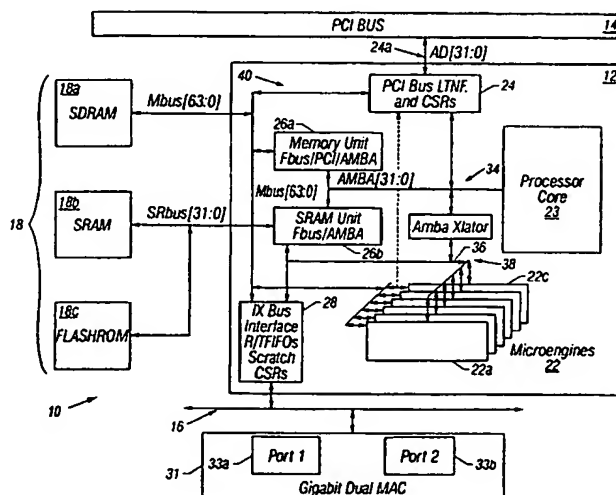
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[Continued on next page]

(54) Title: **METHOD AND APPARATUS FOR GIGABIT PACKET ASSIGNMENT FOR MULTITHREADED PACKET PROCESSING**



(57) Abstract: A network processor that has multiple processing elements, each supporting multiple simultaneous program threads with access to shared resources in an interface. Packet data is received from high-speed ports in segments and each segment is assigned to one of the program threads. Each packet may be assigned to a single program thread, two program threads - one for header segment processing and the other for handling payload segment(s) - or a different program thread for segment of data in a packet. Dedicated inputs for ready status and sequence numbers provide assistance needed for receiving the packet data over a high speed port. The dedicated inputs are used to monitor ready flags from the high speed ports on a cycle-by-cycle basis. The sequence numbers are used by the assigned threads to maintain ordering of segments within a packet, as well as to order the writes of the complete packets to transmit queues.



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Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	<p>US 5 173 897 A (PFEIFFER BODO ET AL) 22 December 1992 (1992-12-22)</p> <p>abstract column 2, line 49 - line 57 column 3, line 25 - line 31 column 3, line 34 - line 44 column 4, line 17 - line 20 column 4, line 58 - line 61 column 5, line 35 - line 44 claim 1</p> <p>--- -/--</p>	<p>1-4, 25, 26 7-10 5, 6, 11-24, 27</p>

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	<p>US 5 978 838 A (PARK HEONCHUL ET AL) 2 November 1999 (1999-11-02)</p> <p>abstract column 1, line 14 - line 16 column 2, line 65 -column 3, line 14 column 4, line 24 - line 28 column 8, line 60 - line 66 claim 6</p> <p>---</p>	<p>7-10</p> <p>14,24</p>
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